

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009029**Date Inspected:** 04-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Li Zhi Jiang, Mr. Shen Fu You

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 2

This QA Inspector observed ZPMC welder Ms. Wang Chaili stencil 045203 is using flux cored welding procedure WPS-B-T-2132-3 to make fillet weld FB3075-001-028 in the 2F position. This QA Inspector measured a welding current of approximately 300 amps and 29.1volts. This QA Inspector observed that Ms. Wang Chaili is certified to make this weld and Quality Control (QC) personnel are monitoring this welding. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC welder Ms. Xu Pei Pei, stencil 050323 is using the submerged arc welding process WPS-B-T-2221-B-U2C-S-1(SAW) to make groove weld SEG055*-003 This QA Inspector observed a welding current of approximately 550 amps and 31.0 volts and these readings are similar to what ZPMC QC Inspectors had recorded. This QA Inspector observed Ms. Xu Pei Pei is certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

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OBG Bay 3

This QA Inspector observed ZPMC welder Mr. Li Yanbing, stencil 208567 is using shielded metal arc welding procedure WPS-B-P-2112 to tack weld CB202G-043 components. This QA Inspector observed the base material appears to have been cleaned where the weld is to be deposited. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which feels hot and it appears to be connected to the welding power supply cable. This QA Inspector measured a welding current of approximately 145 amps. Items observed on this date appeared to generally comply with applicable contract documents.

7DE South of OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Zhenbing, stencil 216086 is using the shielded metal arc welding process to make weld repairs of the weld at segment 7DE between the diaphragm and floor beam SSD16. This QA Inspector was not able to determine the weld number or the depth of the gouge where Mr. Zhenbing was welding, and approximately three meters to the east of this location this QA Inspector observed other gouges in this same weld. See below for additional information concerning these gouges. The QA Inspector observed a welding current of approximately 250 amps. This QA Inspector observed that Mr. Wang Zhenbing is certified to make this weld. This QA Inspector did not observe any Quality Control (QC) personnel in the segment where this welding was taking place between 2100 hours and 2125 hours. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC has gouged the weld at segment 7DE between the diaphragm and floor beam. 7DE is located outside near the front of OBG bay 14. The gouge is approximately 15 mm in depth and the thickness of this plate appears to be approximately 12 mm. The gouge appears to be through the full thickness of the plate and extends into the weld reinforcement on the other side. See the photographs below for additional information. ABF representative Mr. Wang Heng said this gouge was the result of ultrasonic rejection repairs. I asked Mr. Heng if ZPMC is processing a critical weld repair (CWR) to address this gouge. Mr. Heng said he does not know if a CWR has been processed. This observation was made at around 9:00PM and this QA Inspector was not able to locate any QC in the area to ask them if a CWR has been issued.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Lv Fengbao, stencil 045175 is using flux cored welding procedure WPS-B-T-2231-B-U2-F to make weld SEG055A-023. The QA Inspector observed a welding current of approximately 300 amps and 32.3 volts and ZPMC QC Inspector Mr. Liu Wan Ning has recorded a welding current of 288 amps and 29.5 volts. This QA Inspector observed that Mr. Zhao Jibo is certified to make this weld and Quality Control (QC) personnel are monitoring this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC QC Inspector Mr. Liu Wan Ning has recorded that welder Ms. Zou Dianqin, stencil 250050 has used welding procedure specification WPS-B-T-2211-B-L2C-S-2 to make floor beam submerged arc groove weld SEG051*-005. The QC document indicates a welding current of 579 amps and 31.3 volts. This QA Inspector has previously confirmed that Ms. Zou Dianqin is certified to make this weld. Items

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observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Hi Hanbi, stencil 202122 is using flux cored welding procedure WPS-B-T-2231-B-TC-u4b-F to make weld CA55-004. This QA Inspector measured a welding current of approximately 295 amps and 30.7 volts. This QA Inspector observed Mr. Hi Hanbi is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
